Via Facsimile

Appl. No.	:	10/618,111
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Filed	:	07/11/2004
A.U.	:	1712
Examiner	:	Feely, Michael J
Client Ref:		2003P08574US

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Reply Brief

This is a reply to the Examiner's Answer of March 9th, 2006. The status of the claims and the grounds for rejection remain unchanged.

Arguments being on page 2 of this document.

Arguments

Pending claims 1-9 and 11-19 are rejected under 35 USC §103 (a) as being unpatentable over Smith (5,904,984) in view of Cook (6,369,183).

Applicant contests 6 issues in the examiner's rejections and answer to the appeal brief:

First, the Examiner has inappropriately indicated that the Applicant's objective evidence is not supported (see page 17 of Examiner's answer) by citing MPEP 716.01(c), which requires that objective evidence be supported by an affidavit. An affidavit has been entered, and dismissing the objective evidence under 716.01(c) is impermissible. Applicant's 1.132 affidavit of experimental and unexpected results (filed Feb. 24th, 2005) is evidence and the Examiner is treating it as an opinion.

Second, the Examiner has failed to overcome, or even provide comments regarding, the legal precedent noted by the Applicant which provides that a reference disclosing structurally-similar compounds may be overcome where there is evidence showing there is no reasonable expectation of similar properties in structurally-similar compounds. *In re May*, 574 F.2d 1082, 197 USPQ 601 (CCPA 1978). Applicant respectfully submits that such a showing of "no reasonable expectation of similar properties" has been made (note that the Examiner has agreed that the mixing of compounds of the prior art would have disrupted the crystalline structure of the LCT-resin and produced dissimilar properties (page 9 of advisory action, middle paragraph)). But the Examiner then goes on to state that this showing is moot in light of structural similarities. This is an inappropriate legal conclusion.

Third, Applicant respectfully disagrees with the Examiner's statement that Applicant has not provided reasoning why any resin may not appropriately be

combined with Cook. Applicant has given volumes on why Cook cannot be combined with the LCT resin of Smith '984 (for example, as stated in paragraph 5 of the 02-24-2005 1.132 affidavit).

Fourth, the Examiner has not addressed Applicant's assertion regarding the lack of motivation and/or the Examiner's impermissible use of hindsight in producing the flowing chemical reactions as seen in the rejection and again on pages 10-14 of the Examiner's answer. The chemical reactions shown in the Examiner's answer are results-driven and only suggested if at all by the Applicant's invention. As a result, the Examiner inappropriately substituted chemical groups in Cook until achieving a molecule similar to Applicant's. This is not permissible since there is no motivation in Cook or Smith '984 for making these leaps without the benefit of Applicant's invention as a guide.

Fifth, the flowing chemical reactions shown by the Examiner are chemically inaccurate. In attempting to make the molecules of Cook similar the molecules of Applicant's invention, the Examiner still has not addressed the problems brought up in the appeal brief, namely, the impermissibility of making replacements to oxygen atoms and broadly substituting in R groups for skeletal backbones. The Examiner's substitutions ignore steric and electronic effects that the functional groups and backbones have on the chemical reaction. Cook would not lead one skilled in the art to make these substitutions, since they are chemically inaccurate. It is a well established fact that subtle changes in an epoxy resin structure can have a profound effect on the reactivity and cure mechanism of the epoxy. If one made the Examiner's broad replacements, this would change the reactivity of the original molecule, thus destroying the functionality of Cook. Such a result indicates the inappropriateness of the Examiner's attempted substitutions. The Examiner's flowing chemical reactions also are improperly bolstered by the assertion that any epoxy resin is freely substitutable for any other (pages 13-14 of Examiner's answer, text), which Applicant has addressed above.

Sixth, even the Examiner's proposed combination of Cook and Smith '984 would not produce the claimed subject matter of Applicant's invention. Applicant claims subject matter that is crystalline, as given by physical property values. The Examiner agrees that the his suggested "mixing of particles (of the prior art) likely would have disrupted the crystalline structure of the LCT-resin," (page 9 of advisory action, middle paragraph) but he nevertheless maintains his rejection. This is contrary to §103 which requires that every claim limitation must be met by the combination of the prior art references.

In conclusion, any one of the above issues brought up in the appeal brief and not fully addressed in the Examiner's answer are reason enough for reversal.

Respectfully submitted,

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